

HIPPI-6400 OPT Draft 1.0

Parameter	Value	Units
<i>Data link</i>		
Nominal bit rate (per channel)	1000	MBaud
Data rate (per channel)	800	MBaud
Bit Error Ratio (max. per channel))	10^{-12}	
Channel count	12	
Operating distance	220	meters
<i>Transmitter</i>		
Wavelength (min.)	830	nm
Wavelength (max.)	860	nm
Spectral width (max.)	0.85	nm RMS
Avg. launched power (max. per channel)	note 1	dBm
Optical modulation amplitude (min. per channel) ^{2,3}	0.125	mW
Eye opening (min.) ⁴	0.3	UI
Relative intensity noise (max.)	-116	dB/Hz
Deterministic jitter (max.)	tbd	ps
Random jitter (max.)	tbd	ps
Optical rise/fall time (max.) ⁵	260	ps
Crosstalk (max.)	-30	dB
Interchannel skew (max.)	500	ps
<i>Receiver</i>		
Received optical modulation amplitude (min.) ⁶	0.031	mW
Avg. received power (max.)	-4	dBm
Receiver return loss (min.)	12	dB
Electrical rise/fall time (max.) ⁵	400	ps
Interchannel skew (max.)	500	ps
<i>Optical Path</i>		
Fiber core diameter	62.5	um
Fiber bandwidth (min.)	200	MHz*km
Fiber plant attenuation (max.)	3.5	dB/km
Interchannel skew (max.)	5	ns
Total connector loss (max.) ⁷	2	dB
Recommended connector ⁸	MTP	

1- Max. average coupled power must conform to IEC requirements for Class 3a laser product and CDRH CFR 21 Ch. 1 (J) Part 1040.1 requirements for Class 1 laser product and must not exceed -4 dBm for any fiber.

2- Optical modulation amplitude is defined as the difference in optical power between a logic 1 and a logic 0.

3- Equivalent to -12dBm avg. power with an infinite extinction ratio.

4- at BER $\leq 10^{-12}$

5- Specified from 20% to 80%.

6- Equivalent to -18dBm avg. power with an infinite extinction ratio.

7- Statistical analysis using mean loss plus three standard deviations allows up to four in-line connector pairs.

8- Referred to as "MPO" connector outside the U.S.

Note: Transmitter eye mask (similar to Fibre Channel or Serial HIPPI) should be included to account for effects of overshoot, undershoot, and ringing.